

Appln. No. 09/905,716

Amendment Date: June 19, 2006

Reply to Office Action of February 22, 2006

Page 2

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-8 (Cancelled).

9. (New) A receiver for receiving and efficiently separating a composite 3-G wireless communications signal into constituent baseband components, wherein said receiver combines multiple processing tasks of a 3-G receiver into a single device, said device performs the processing required for multiple channels, the single device comprising,

a resampling polyphase filter for performing tasks of simultaneous spectral translation of multiple contiguous spectral regions to baseband, the steps including:

a.) separating the signals residing in the multiple contiguous spectral regions for bandwidth reduction of each of a varied bandwidth signal component,

b.) performing interpolation to change sample rates of each of a multiple output series by a rational ratio matched to the bandwidth of each of each signal component, and

a single polyphase filter coupled to operate in a resampling mode such that sample rate inputs and sample rate outputs are different.

Appln. No. 09/905,716

Amendment Date: June 19, 2006,

Reply to Office Action of February 22, 2006

Page 3

10. (New) A receiver for receiving and efficiently separating a composite 3-G wireless communications signal into constituent baseband components, wherein said receiver combines multiple processing tasks of a 3-G receiver into a single device, said device performs the processing required for multiple channels, the single device comprising,

a filter for;

a.) changing a sample rate to induce spectral aliasing of multiple spectral regions, and

b.) operating in a resampling mode for intentional aliasing of each of several spectral regions and outputting simultaneous separate data streams from varied bandwidth spectral regions at varied output sample rates.